

Complete the square to find the vertex form.
Then find the vertex, los, and max/min.

$$f(x) = -2x^2 + 8x - 7$$

$$f(x) + 7 = -2x^2 + 8x$$

$$V : (2, 1)$$

$$f(x) + 7 = -2(x^2 - 4x)$$

$$f(x) + 7 - 8 = -2(x^2 - 4x + 4) \quad los : x = 2$$

$$f(x) - 1 = -2(x - 2)^2$$

$$max : y = 1$$

$$f(x) = -2(x - 2)^2 + 1$$